

SEQUENCE LISTING

<110> WELCHER, ANDREW
SARMIENTO, ULLA
SCHULTZ, HENRY
CHUTE, HILARY

<120> B7-LIKE MOLECULES AND USES THEREOF

<130> A-692

<140> Not Yet Provided

<141> 2000-11-28

<150> US 60/214,512

<151> 2000-06-28

<160> 15

<170> PatentIn version 3.0

<210> 1

<211> 1175

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (27)..(1172)

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Leu Lys Gly Ser Gln Ala Arg Phe Asn Cys Thr Val Ser Gln Gly Trp	
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Lys Leu Ile Met Trp Ala Leu Ser Asp Met Val Val Leu Ser Val Arg	
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Pro Met Glu Pro Ile Ile Thr Asn Asp Arg Phe Thr Ser Gln Arg Tyr	
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gac cag ggc ggg aac ttc acc tcg gag atg atc atc cac aat gtg gag	293
Asp Gln Gly Gly Asn Phe Thr Ser Glu Met Ile Ile His Asn Val Glu	
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ccc agt gat tcg ggg aac atc aga tgc agc ctc cag aac agt cgc ctg	341
Pro Ser Asp Ser Gly Asn Ile Arg Cys Ser Leu Gln Asn Ser Arg Leu	
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His Gly Ser Ala Tyr Leu Thr Val Gln Val Met Gly Glu Leu Phe Ile	
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Pro Ser Val Asn Leu Val Val Ala Glu Asn Glu Pro Cys Glu Val Thr	
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Cys Leu Pro Ser His Trp Thr Arg Leu Pro Asp Ile Ser Trp Glu Leu	
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ggg ctc ctg gtc agc cat tca agc tat tat ttt gtt ccg gag ccc agc	533
Gly Leu Leu Val Ser His Ser Ser Tyr Tyr Phe Val Pro Glu Pro Ser	
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Asp Leu Gln Ser Ala Val Ser Ile Leu Ala Leu Thr Pro Gln Ser Asn	
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Gly Thr Leu Thr Cys Val Ala Thr Trp Lys Ser Leu Lys Ala Arg Lys	
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tct gca act gta aat ctc act gtg att cgg tgt ccc caa gac act gga	677
Ser Ala Thr Val Asn Leu Thr Val Ile Arg Cys Pro Gln Asp Thr Gly	
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Gly Gly Ile Asn Ile Pro Gly Val Leu Ser Ser Leu Pro Ser Leu Gly	
220 225 230	
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Phe Ser Leu Pro Thr Trp Gly Lys Val Gly Leu Gly Leu Ala Gly Thr	
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Met Leu Leu Thr Pro Thr Cys Thr Leu Thr Ile Arg Cys Cys Cys Cys	
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Cys Arg Arg Lys Arg Gly Phe Arg Ile Gln Phe Gln Lys Lys Ser Glu	
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315 320 325	
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Pro Pro Lys Ser Cys Glu Ser Ser Asp Pro Glu Gln Arg Asn Ser Ser	
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Cys Gly Pro Pro His Gln Arg Ala Asp Gln Arg Pro Pro Arg Pro Ala	
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Asn Thr Thr Val Val
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1175

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Ser Asp Met Val Val Leu Ser Val Arg Pro Met Glu Pro Ile Ile Thr
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Asn Asp Arg Phe Thr Ser Gln Arg Tyr Asp Gln Gly Gly Asn Phe Thr
65 70 75 80

Ser Glu Met Ile Ile His Asn Val Glu Pro Ser Asp Ser Gly Asn Ile
85 90 95

Arg Cys Ser Leu Gln Asn Ser Arg Leu His Gly Ser Ala Tyr Leu Thr
100 105 110

Val Gln Val Met Gly Glu Leu Phe Ile Pro Ser Val Asn Leu Val Val
115 120 125

Ala Glu Asn Glu Pro Cys Glu Val Thr Cys Leu Pro Ser His Trp Thr
130 135 140

Arg Leu Pro Asp Ile Ser Trp Glu Leu Gly Leu Leu Val Ser His Ser
145 150 155 160

Ser Tyr Tyr Phe Val Pro Glu Pro Ser Asp Leu Gln Ser Ala Val Ser
165 170 175

Ile Leu Ala Leu Thr Pro Gln Ser Asn Gly Thr Leu Thr Cys Val Ala
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Thr Trp Lys Ser Leu Lys Ala Arg Lys Ser Ala Thr Val Asn Leu Thr
195 200 205

Val Ile Arg Cys Pro Gln Asp Thr Gly Gly Gly Ile Asn Ile Pro Gly
210 215 220

Val Leu Ser Ser Leu Pro Ser Leu Gly Phe Ser Leu Pro Thr Trp Gly
225 230 235 240

Lys Val Gly Leu Gly Leu Ala Gly Thr Met Leu Leu Thr Pro Thr Cys
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Thr Leu Thr Ile Arg Cys Cys Cys Cys Arg Arg Arg Cys Cys Gly Cys
260 265 270

Asn Cys Cys Cys Arg Cys Cys Phe Cys Cys Arg Arg Lys Arg Gly Phe
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Arg Ile Gln Phe Gln Lys Lys Ser Glu Lys Glu Lys Thr Asn Lys Glu
290 295 300

Thr Glu Thr Glu Ser Gly Asn Glu Asn Ser Gly Tyr Asn Ser Asp Glu
305 310 315 320

Gln Lys Thr Thr Asp Thr Ala Ser Leu Pro Pro Lys Ser Cys Glu Ser
325 330 335

Ser Asp Pro Glu Gln Arg Asn Ser Ser Cys Gly Pro Pro His Gln Arg
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Ala Asp Gln Arg Pro Pro Arg Pro Ala Ser His Pro Gln Ala Ser Phe
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Gly Ser Gly Asn Glu Val Ile Glu Gly Pro Gln Asn Ala Arg Val Leu
15 20 25 30

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Lys Gly Ser Gln Ala Arg Phe Asn Cys Thr Val Ser Gln Gly Trp Lys

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atg	gag	ccc	atc	atc	acc	aat	gac	cgc	ttc	acc	tct	cag	agg	tac	gac	241				
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cag	ggc	ggg	aac	ttc	acc	tcg	gag	atg	atc	atc	cac	aat	gtg	gag	ccc	289				
Gln	Gly	Gly	Asn	Phe	Thr	Ser	Glu	Met	Ile	Ile	His	Asn	Val	Glu	Pro					
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Ser	Asp	Ser	Gly	Asn	Ile	Arg	Cys	Ser	Leu	Gln	Asn	Ser	Arg	Leu	His					
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gga	tct	gct	tac	ctt	acc	gtc	caa	gtt	atg	gga	gag	ctg	ttc	att	ccc	385				
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cta	ccc	tca	cac	tgg	acc	tgg	ctc	ccg	gat	att	tcc	tgg	gag	ctc	ggt	481				
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Thr	Leu	Thr	Cys	Val	Ala	Thr	Trp	Lys	Ser	Leu	Lys	Ala	Arg	Lys	Ser					
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180 185 190

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Val Asn Leu Thr Val Ile Arg Cys Pro Gln Asp Thr Gly Gly Gly Ile
210 215 220

Asn Ile Pro Gly Val Leu Ser Ser Leu Pro Ser Leu Gly Phe Ser Leu
225 230 235 240

Pro Thr Trp Gly Lys Val Gly Leu Gly Leu Ala Gly Thr Met Leu Leu
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Thr Pro Thr Cys Thr Leu Thr Ile Arg Cys Cys Cys Cys Arg Arg Arg
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Cys Cys Gly Cys Asn Cys Cys Cys Arg Cys Cys Phe Cys Cys Arg Arg
275 280 285

Lys Arg Gly Phe Arg Ile Gln Phe Gln Lys Lys Ser Glu Lys Glu Lys
290 295 300

Thr Asn Lys Glu Thr Glu Thr Glu Ser Gly Asn Glu Asn Ser Gly Tyr
305 310 315 320

Asn Ser Asp Glu Gln Lys Thr Thr Asp Thr Ala Ser Leu Pro Pro Lys
325 330 335

Ser Cys Glu Ser Ser Asp Pro Glu Gln Arg Asn Ser Ser Cys Gly Pro
340 345 350

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Val Val
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Met Glu Arg His Leu Leu Thr Val Pro Glu Ala
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gta ggt tct ggg tct ggt aat gaa gtc ata gaa ggc ccc cag aat gca 160
Val Gly Ser Gly Ser Gly Asn Glu Val Ile Glu Gly Pro Gln Asn Ala
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aca gtc ctg aag ggc tcc cag gct cgc ttc aac tgc acc gtc tcc cag 208
Thr Val Lys Gly Ser Gln Ala Arg Phe Asn Cys Thr Val Ser Gln
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ggc tgg aag ctc atc atg tgg gct ctc agt gac atg gtg gtg cta agc 256
Gly Trp Lys Leu Ile Met Trp Ala Leu Ser Asp Met Val Val Leu Ser
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Val Arg Pro Met Glu Pro Ile Ile Thr Asn Asp Arg Phe Thr Ser Gln
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Arg Tyr Asp Gln Gly Gly Asn Phe Thr Ser Glu Met Ile Ile His Asn
80 85 90
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Val Glu Pro Ser Asp Ser Gly Asn Ile Arg Cys Ser Leu Gln Asn Ser
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Arg Leu His Gly Ser Ala Tyr Leu Thr Val Gln Val Met Gly Glu Leu
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Phe Ile Pro Ser Val Asn Leu Val Val Ala Glu Asn Glu Pro Cys Glu
125 130 135
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Val Thr Cys Leu Pro Ser His Trp Thr Arg Leu Pro Asp Ile Ser Trp
140 145 150 155
gag ctc ggt ctc ctg gtc agc cat tca agc tat tat ttt gtt ccg gag 592
Glu Leu Gly Leu Leu Val Ser His Ser Ser Tyr Tyr Phe Val Pro Glu
160 165 170
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35 40 45

Met Trp Ala Leu Ser Asp Met Val Val Leu Ser Val Arg Pro Met Glu
50 55 60

Pro Ile Ile Thr Asn Asp Arg Phe Thr Ser Gln Arg Tyr Asp Gln Gly
65 70 75 80

Gly Asn Phe Thr Ser Glu Met Ile Ile His Asn Val Glu Pro Ser Asp
85 90 95

Ser Gly Asn Ile Arg Cys Ser Leu Gln Asn Ser Arg Leu His Gly Ser
100 105 110

Ala Tyr Leu Thr Val Gln Val Met Gly Glu Leu Phe Ile Pro Ser Val
115 120 125

Asn Leu Val Val Ala Glu Asn Glu Pro Cys Glu Val Thr Cys Leu Pro
130 135 140

Ser His Trp Thr Arg Leu Pro Asp Ile Ser Trp Glu Leu Gly Leu Leu
145 150 155 160

Val Ser His Ser Ser Tyr Tyr Phe Val Pro Glu Pro Ser Asp Leu Gln
165 170 175

Ser Ala Val Ser Ile Leu Ala Leu Thr Pro Gln Ser Asn Gly Thr Leu
180 185 190

Thr Cys Val Ala Thr Trp Lys Ser Leu Lys Ala Arg Lys Ser Ala Thr
195 200 205

Val Asn Leu Thr Val Ile Arg Cys Pro Gln Asp Thr Gly Gly Gly Ile
210 215 220

Asn Ile Pro Gly Val Leu Ser Ser Leu Pro Ser Leu Gly Phe Ser Leu
225 230 235 240

Pro Thr Trp Gly Lys Val Gly Leu Gly Leu Ala Gly Thr Met Leu Leu
245 250 255

Thr Pro Thr Cys Thr Leu Thr Ile Arg Cys Cys Cys Cys Arg Arg Arg
260 265 270

Cys Cys Gly Cys Asn Cys Cys Cys Arg Cys Cys Phe Cys Cys Arg Arg
275 280 285

Lys Arg Gly Phe Arg Ile Gln Phe Gln Lys Lys Ser Glu Lys Glu Lys
290 295 300

Thr Asn Lys Glu Thr Glu Thr Glu Ser Gly Asn Glu Asn Ser Gly Tyr
305 310 315 320

Asn Ser Asp Glu Gln Lys Thr Thr Glu Thr Ala Ser Leu Pro Pro Lys
325 330 335

Ser Cys Glu Ser Ser Asp Pro Glu Gln Arg Asn Ser Ser Cys Gly Pro
340 345 350

Pro His Gln Arg Ala Asp Gln Arg Pro Pro Arg Pro Ala Ser His Pro
355 360 365

Gln Ala Ser Phe Asn Leu Ala Ser Pro Glu Lys Val Ser Asn Thr Thr
370 375 380

Val Val
385

<210> 7
<211> 1139
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(1131)

<400> 7
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Met Val Ala Gly Ala Met Glu Asn Arg Asp Pro Pro Gly Ser Gly Ser
1 5 10 15
ggt aat gaa gtc ata gaa ggc ccc caa aat gca aga gtc ctg aag ggc 96
Gly Asn Glu Val Ile Glu Gly Pro Gln Asn Ala Arg Val Leu Lys Gly
20 25 30
tcc cag gct cgc ttc aac tgc acc gtc tcc cag ggc tgg aag ctc atc 144
Ser Gln Ala Arg Phe Asn Cys Thr Val Ser Gln Gly Trp Lys Leu Ile
35 40 45
atg tgg gct ctc agt gac atg gtg gtg cta agc gtc agg ccc atg gag 192
Met Trp Ala Leu Ser Asp Met Val Val Leu Ser Val Arg Pro Met Glu
50 55 60
ccc atc atc acc aat gac cgc ttc acc tct cag agg tac gac cag ggc 240
Pro Ile Ile Thr Asn Asp Arg Phe Thr Ser Gln Arg Tyr Asp Gln Gly
65 70 75 80

ggg Gly	aac Asn	ctc Leu	acc Thr	tgc Ser 85	gag Glu	atg Met	atc Ile	atc Ile	cac His 90	aat Asn	gtg Val	gag Glu	ccc Pro	agt Ser 95	gat Asp	288
tgc Ser	ggg Gly	aac Asn	atc Ile 100	aga Arg	tgc Cys	agc Ser	ctc Leu	cag Gln 105	aac Asn	agt Ser	cgc Arg	ctg Leu	cat His 110	gga Gly	tct Ser	336
gct Ala	tac Tyr	ctt Leu 115	acc Thr	gtc Val	caa Gln	gtt Val	atg Met 120	gga Gly	gag Glu	ctg Leu	ttc Phe	att Ile 125	ccc Pro	agt Ser	gtt Val	384
aat Asn	ctt Leu 130	gta Val	gtc Val	gct Ala	gag Glu	aat Asn 135	gaa Glu	cct Pro	tgt Cys	gaa Glu	gtt Val 140	act Thr	tgt Cys	cta Leu	ccc Pro	432
tca Ser 145	cac His	tgg Trp	acc Thr	cgg Arg	ctc Leu 150	ccg Pro	gat Asp	att Ile	tcc Ser	tgg Trp 155	gag Glu	ctc Leu	ggg Gly	ctc Leu	ctg Leu 160	480
gtc Val	agc Ser	cat His	tca Ser	agc Ser 165	tat Tyr	tat Tyr	ttt Phe	gtt Val	ccg Pro 170	gag Glu	ccc Pro	agc Ser	gac Asp	ctt Leu 175	caa Gln	528
agt Ser	gca Ala	gtg Val	agc Ser 180	atc Ile	ctg Leu	gct Ala	ctg Leu	acc Thr 185	cca Pro	cag Gln	agc Ser	aat Asn	ggg Gly 190	act Thr	ttg Leu	576
act Thr	tgc Cys	gtg Val 195	gct Ala	acc Thr	tgg Trp	aag Lys	agc Ser 200	ctg Leu	aag Lys	gcc Ala	cgc Arg	aag Lys 205	tct Ser	gca Ala	act Thr	624
gta Val	aat Asn 210	ctc Leu	act Thr	gtg Val	att Ile	cgg Arg 215	tgt Cys	ccc Pro	caa Gln	gac Asp	act Thr 220	gga Gly	ggg Gly	ggg Gly	att Ile	672
aat Asn 225	att Ile	cca Pro	ggg Gly	gta Val	tta Leu 230	tca Ser	agt Ser	tta Leu	ccg Pro	agt Ser 235	tta Leu	ggg Gly	ttt Phe	tca Ser	ttg Leu 240	720
cct Pro	act Thr	tgg Trp	ggc Gly	aaa Lys 245	gtt Val	gga Gly	ctt Leu	gga Gly	cta Leu 250	gca Ala	ggc Gly	acc Thr	atg Met	ctt Leu 255	ctg Leu	768
acg Thr	ccg Pro	acg Thr	tgt Cys 260	act Thr	ctt Leu	aca Thr	ata Ile	cgc Arg 265	tgc Cys	tgc Cys	tgc Cys	tgc Cys	cgc Arg 270	cgt Arg	cgt Arg	816
tgt Cys	tgt Cys	ggc Gly 275	tgc Cys	aac Asn	tgc Cys	tgc Cys	tgc Cys 280	cgt Arg	tgt Cys	tgt Cys	ttc Phe	tgc Cys 285	tgt Cys	aga Arg	aga Arg	864
aaa Lys	aga Arg 290	gga Gly	aat Asn	ctg Leu	aaa Lys	aag Lys 295	aga Arg	aga Arg	caa Gln	aca Thr	aag Lys 300	aaa Lys	ctg Leu	aga Arg	cag Gln	912
aaa Lys 305	gtg Val	gaa Glu	atg Met	aaa Lys	act Thr 310	ccg Pro	gct Ala	aca Thr	att Ile	cag Gln 315	atg Met	aac Asn	aaa Lys	aga Arg	cca Pro 320	960
cag Gln	aca Thr	ccg Pro	ctt Leu	ctc Leu 325	tcc Ser	ctc Leu	cca Pro	aat Asn	cct Pro 330	gtg Val	aat Asn	cca Pro	gtg Val	atc Ile 335	ctg Leu	1008

aac aaa gaa aca gta gct gtg gcc ctc ctc acc agc ggg ctg atc aac 1056
Asn Lys Glu Thr Val Ala Val Ala Leu Leu Thr Ser Gly Leu Ile Asn
340 345 350

gtc cac cca ggc cag caa gtc atc cac agg ctt ctt tta atc tgg cca 1104
Val His Pro Gly Gln Gln Val Ile His Arg Leu Leu Leu Ile Trp Pro
355 360 365

gtc ctg aga agg tca gta ata caa ctg tagtataa 1139
Val Leu Arg Arg Ser Val Ile Gln Leu
370 375

<210> 8
<211> 377
<212> PRT
<213> Homo sapiens

<400> 8

Met Val Ala Gly Ala Met Glu Asn Arg Asp Pro Pro Gly Ser Gly Ser
1 5 10 15

Gly Asn Glu Val Ile Glu Gly Pro Gln Asn Ala Arg Val Leu Lys Gly
20 25 30

Ser Gln Ala Arg Phe Asn Cys Thr Val Ser Gln Gly Trp Lys Leu Ile
35 40 45

Met Trp Ala Leu Ser Asp Met Val Val Leu Ser Val Arg Pro Met Glu
50 55 60

Pro Ile Ile Thr Asn Asp Arg Phe Thr Ser Gln Arg Tyr Asp Gln Gly
65 70 75 80

Gly Asn Leu Thr Ser Glu Met Ile Ile His Asn Val Glu Pro Ser Asp
85 90 95

Ser Gly Asn Ile Arg Cys Ser Leu Gln Asn Ser Arg Leu His Gly Ser
100 105 110

Ala Tyr Leu Thr Val Gln Val Met Gly Glu Leu Phe Ile Pro Ser Val
115 120 125

Asn Leu Val Val Ala Glu Asn Glu Pro Cys Glu Val Thr Cys Leu Pro
130 135 140

Ser His Trp Thr Arg Leu Pro Asp Ile Ser Trp Glu Leu Gly Leu Leu
145 150 155 160

Val Ser His Ser Ser Tyr Tyr Phe Val Pro Glu Pro Ser Asp Leu Gln
165 170 175

Ser Ala Val Ser Ile Leu Ala Leu Thr Pro Gln Ser Asn Gly Thr Leu
180 185 190

Thr Cys Val Ala Thr Trp Lys Ser Leu Lys Ala Arg Lys Ser Ala Thr
195 200 205

Val Asn Leu Thr Val Ile Arg Cys Pro Gln Asp Thr Gly Gly Gly Ile
210 215 220

Asn Ile Pro Gly Val Leu Ser Ser Leu Pro Ser Leu Gly Phe Ser Leu
225 230 235 240

Pro Thr Trp Gly Lys Val Gly Leu Gly Leu Ala Gly Thr Met Leu Leu
245 250 255

Thr Pro Thr Cys Thr Leu Thr Ile Arg Cys Cys Cys Cys Arg Arg Arg
260 265 270

Cys Cys Gly Cys Asn Cys Cys Cys Arg Cys Cys Phe Cys Cys Arg Arg
275 280 285

Lys Arg Gly Asn Leu Lys Lys Arg Arg Gln Thr Lys Lys Leu Arg Gln
290 295 300

Lys Val Glu Met Lys Thr Pro Ala Thr Ile Gln Met Asn Lys Arg Pro
305 310 315 320

Gln Thr Pro Leu Leu Ser Leu Pro Asn Pro Val Asn Pro Val Ile Leu
325 330 335

Asn Lys Glu Thr Val Ala Val Ala Leu Leu Thr Ser Gly Leu Ile Asn
340 345 350

Val His Pro Gly Gln Gln Val Ile His Arg Leu Leu Leu Ile Trp Pro
355 360 365

Val Leu Arg Arg Ser Val Ile Gln Leu
370 375

<210> 9
<211> 1195
<212> DNA
<213> Mus musculus

<220>
<221> CDS
<222> (53)..(1162)

<400> 9
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Met Glu

1

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Gly Ser Trp Arg Asp Val Leu Ala Val Leu Val Ile Leu Ala Gln Leu	
5 10 15	
aca gct tcc gga tcc agt tat cag atc ata gaa ggt cct cag aat gta	154
Thr Ala Ser Gly Ser Ser Tyr Gln Ile Ile Glu Gly Pro Gln Asn Val	
20 25 30	
aca gtc cta aag gac tca gag gct cac ttc aac tgc acc gtg act cac	202
Thr Val Leu Lys Asp Ser Glu Ala His Phe Asn Cys Thr Val Thr His	
35 40 45 50	
ggc tgg aag ctt ctc atg tgg act ctt aac caa atg gtg gtg ctg agt	250
Gly Trp Lys Leu Leu Met Trp Thr Leu Asn Gln Met Val Val Leu Ser	
55 60 65	
ctc acc acc caa gga ccc atc atc acc aac aac cgc ttc acc tat gcc	298
Leu Thr Thr Gln Gly Pro Ile Ile Thr Asn Asn Arg Phe Thr Tyr Ala	
70 75 80	
agt tac aac agc act gac agc ttc atc tcg gag ttg atc atc cat gat	346
Ser Tyr Asn Ser Thr Asp Ser Phe Ile Ser Glu Leu Ile Ile His Asp	
85 90 95	
gtg cag ccc agt gac tcg gga tcc gtg caa tgc agc ctg cag aac agc	394
Val Gln Pro Ser Asp Ser Gly Ser Val Gln Cys Ser Leu Gln Asn Ser	
100 105 110	
cat ggg ttt gga tct gcc ttc ctc tca gtg caa gtc atg ggg acc ctg	442
His Gly Phe Gly Ser Ala Phe Leu Ser Val Gln Val Met Gly Thr Leu	
115 120 125 130	
aac att cct agc aac aac ctt ata gtc act gag ggt gaa ccc tgt aat	490
Asn Ile Pro Ser Asn Asn Leu Ile Val Thr Glu Gly Glu Pro Cys Asn	
135 140 145	
gtg act tgc tat gcc gtg ggc tgg acc tca ctc ccg gat att tcc tgg	538
Val Thr Cys Tyr Ala Val Gly Trp Thr Ser Leu Pro Asp Ile Ser Trp	
150 155 160	
gag ctt gag gtt ccc gta agc cat tcg agt tac aat tcc ttt ctg gag	586
Glu Leu Glu Val Pro Val Ser His Ser Ser Tyr Asn Ser Phe Leu Glu	
165 170 175	
ccg ggc aac ttt atg agg gtc ttg agt gtc ctg gac ctc aca cca ctg	634
Pro Gly Asn Phe Met Arg Val Leu Ser Val Leu Asp Leu Thr Pro Leu	
180 185 190	
ggc aac ggg acc ttg act tgt gtg gca gag ctg aag gac ttg cag gcc	682
Gly Asn Gly Thr Leu Thr Cys Val Ala Glu Leu Lys Asp Leu Gln Ala	
195 200 205 210	
agc aag tcc tta act gtc aac ctg act gtg gtt cag cct cca cct gac	730
Ser Lys Ser Leu Thr Val Asn Leu Thr Val Val Gln Pro Pro Pro Asp	
215 220 225	
agt att gga gag gaa ggc cca gca ctg ccg acc tgg gcc atc atc ctg	778
Ser Ile Gly Glu Glu Gly Pro Ala Leu Pro Thr Trp Ala Ile Ile Leu	
230 235 240	
ctg gca gtg gcc ttt tcc ttg ctc ttg atc ctg atc att gtt ttg att	826
Leu Ala Val Ala Phe Ser Leu Leu Leu Ile Leu Ile Ile Val Leu Ile	

245	250	255	
ata ata ttc tgt tgc tgt tgt gcc tcc agg aga gaa aag gaa gaa tct Ile Ile Phe Cys Cys Cys Cys Ala Ser Arg Arg Glu Lys Glu Glu Ser 260 265 270			874
act tat caa aat gaa ata agg aaa tct gca aac atg agg aca aac aaa Thr Tyr Gln Asn Glu Ile Arg Lys Ser Ala Asn Met Arg Thr Asn Lys 275 280 285 290			922
gca gat ccg gag aca aag tta aaa agt gga aag gaa aac tac ggg tac Ala Asp Pro Glu Thr Lys Leu Lys Ser Gly Lys Glu Asn Tyr Gly Tyr 295 300 305			970
agt tcg gat gag gca aag gct gca cag act gca tct ctc cct cct aaa Ser Ser Asp Glu Ala Lys Ala Ala Gln Thr Ala Ser Leu Pro Pro Lys 310 315 320			1018
tct gct gaa gtc agc ctt cca gaa aaa cgc agc agt agc ctt cct tat Ser Ala Glu Val Ser Leu Pro Glu Lys Arg Ser Ser Ser Leu Pro Tyr 325 330 335			1066
cag gaa ctc aat aaa cat cag ccc ggt cca gca act cat cca cgg gtt Gln Glu Leu Asn Lys His Gln Pro Gly Pro Ala Thr His Pro Arg Val 340 345 350			1114
tcc ttt gac atc gcc agt cct cag aag gtc aga aat gtg act tta gtg Ser Phe Asp Ile Ala Ser Pro Gln Lys Val Arg Asn Val Thr Leu Val 355 360 365 370			1162
taataaagac ttctcatgac tgtacttggt gca			1195

<210> 10
 <211> 370
 <212> PRT
 <213> Mus musculus

<400> 10

Met Glu Gly Ser Trp Arg Asp Val Leu Ala Val Leu Val Ile Leu Ala
 1 5 10 15

Gln Leu Thr Ala Ser Gly Ser Ser Tyr Gln Ile Ile Glu Gly Pro Gln
 20 25 30

Asn Val Thr Val Leu Lys Asp Ser Glu Ala His Phe Asn Cys Thr Val
 35 40 45

Thr His Gly Trp Lys Leu Leu Met Trp Thr Leu Asn Gln Met Val Val
 50 55 60

Leu Ser Leu Thr Thr Gln Gly Pro Ile Ile Thr Asn Asn Arg Phe Thr
 65 70 75 80

Tyr Ala Ser Tyr Asn Ser Thr Asp Ser Phe Ile Ser Glu Leu Ile Ile
 85 90 95

His Asp Val Gln Pro Ser Asp Ser Gly Ser Val Gln Cys Ser Leu Gln
100 105 110

Asn Ser His Gly Phe Gly Ser Ala Phe Leu Ser Val Gln Val Met Gly
115 120 125

Thr Leu Asn Ile Pro Ser Asn Asn Leu Ile Val Thr Glu Gly Glu Pro
130 135 140

Cys Asn Val Thr Cys Tyr Ala Val Gly Trp Thr Ser Leu Pro Asp Ile
145 150 155 160

Ser Trp Glu Leu Glu Val Pro Val Ser His Ser Ser Tyr Asn Ser Phe
165 170 175

Leu Glu Pro Gly Asn Phe Met Arg Val Leu Ser Val Leu Asp Leu Thr
180 185 190

Pro Leu Gly Asn Gly Thr Leu Thr Cys Val Ala Glu Leu Lys Asp Leu
195 200 205

Gln Ala Ser Lys Ser Leu Thr Val Asn Leu Thr Val Val Gln Pro Pro
210 215 220

Pro Asp Ser Ile Gly Glu Glu Gly Pro Ala Leu Pro Thr Trp Ala Ile
225 230 235 240

Ile Leu Leu Ala Val Ala Phe Ser Leu Leu Leu Ile Leu Ile Ile Val
245 250 255

Leu Ile Ile Ile Phe Cys Cys Cys Cys Ala Ser Arg Arg Glu Lys Glu
260 265 270

Glu Ser Thr Tyr Gln Asn Glu Ile Arg Lys Ser Ala Asn Met Arg Thr
275 280 285

Asn Lys Ala Asp Pro Glu Thr Lys Leu Lys Ser Gly Lys Glu Asn Tyr
290 295 300

Gly Tyr Ser Ser Asp Glu Ala Lys Ala Ala Gln Thr Ala Ser Leu Pro
305 310 315 320

Pro Lys Ser Ala Glu Val Ser Leu Pro Glu Lys Arg Ser Ser Ser Leu
325 330 335

Pro Tyr Gln Glu Leu Asn Lys His Gln Pro Gly Pro Ala Thr His Pro
340 345 350

Arg Val Ser Phe Asp Ile Ala Ser Pro Gln Lys Val Arg Asn Val Thr
355 360 365

Leu Val
370

<210> 11
<211> 895
<212> DNA
<213> Mus musculus

<220>
<221> CDS
<222> (53) .. (862)

<400> 11
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Met Glu
1

ggc agc tgg aga gat gtc ctg gct gtg ctg gtc atc ctg gct cag ctg 106
Gly Ser Trp Arg Asp Val Leu Ala Val Leu Val Ile Leu Ala Gln Leu
5 10 15

aca gct tcc gga tcc agt tat cag atc ata gaa ggt cct cag aat gta 154
Thr Ala Ser Gly Ser Ser Tyr Gln Ile Ile Glu Gly Pro Gln Asn Val
20 25 30

aca gtc cta aag gac tca gag gct cac ttc aac tgc acc gtg act cac 202
Thr Val Leu Lys Asp Ser Glu Ala His Phe Asn Cys Thr Val Thr His
35 40 45 50

ggc tgg aag ctt ctc atg tgg act ctt aac caa atg gtg gtg ctg agt 250
Gly Trp Lys Leu Leu Met Trp Thr Leu Asn Gln Met Val Val Leu Ser
55 60 65

ctc acc acc caa gga ccc atc atc acc aac aac cgc ttc acc tat gcc 298
Leu Thr Thr Gln Gly Pro Ile Ile Thr Asn Asn Arg Phe Thr Tyr Ala
70 75 80

agt tac aac agc act gac agc ttc atc tcg gag ttg atc atc cat gat 346
Ser Tyr Asn Ser Thr Asp Ser Phe Ile Ser Glu Leu Ile Ile His Asp
85 90 95

gtg cag ccc agt gac tcg gga tcc gtg caa tgc agc ctg cag aac agc 394
Val Gln Pro Ser Asp Ser Gly Ser Val Gln Cys Ser Leu Gln Asn Ser
100 105 110

cat ggg ttt gga tct gcc ttc ctc tca gtg caa gac agt att gga gag 442
His Gly Phe Gly Ser Ala Phe Leu Ser Val Gln Asp Ser Ile Gly Glu
115 120 125 130

gaa ggc cca gca ctg ccg acc tgg gcc atc atc ctg ctg gca gtg gcc 490
Glu Gly Pro Ala Leu Pro Thr Trp Ala Ile Ile Leu Leu Ala Val Ala
135 140 145

ttt tcc ttg ctc ttg atc ctg atc att gtt ttg att ata ata ttc tgt 538
Phe Ser Leu Leu Leu Ile Leu Ile Ile Val Leu Ile Ile Ile Phe Cys
150 155 160

tgc tgt tgt gcc tcc agg aga gaa aag gaa gaa tct act tat caa aat 586
Cys Cys Cys Ala Ser Arg Arg Glu Lys Glu Glu Ser Thr Tyr Gln Asn

165	170	175	
gaa ata agg aaa tct gca aac atg agg aca aac aaa gca gat ccg gag Glu Ile Arg Lys Ser Ala Asn Met Arg Thr Asn Lys Ala Asp Pro Glu 180 185 190			634
aca aag tta aaa agt gga aag gaa aac tac ggg tac agt tcg gat gag Thr Lys Leu Lys Ser Gly Lys Glu Asn Tyr Gly Tyr Ser Ser Asp Glu 195 200 205 210			682
gca aag gct gca cag act gca tct ctc cct cct aaa tct gct gaa gtc Ala Lys Ala Ala Gln Thr Ala Ser Leu Pro Pro Lys Ser Ala Glu Val 215 220 225			730
agc ctt cca gaa aaa cgc agc agt agc ctt cct tat cag gaa ctc aat Ser Leu Pro Glu Lys Arg Ser Ser Ser Leu Pro Tyr Gln Glu Leu Asn 230 235 240			778
aaa cat cag ccc ggt cca gca act cat cca cgg gtt tcc ttt gac atc Lys His Gln Pro Gly Pro Ala Thr His Pro Arg Val Ser Phe Asp Ile 245 250 255			826
gcc agt cct cag aag gtc aga aat gtg act tta gtg taataaagac Ala Ser Pro Gln Lys Val Arg Asn Val Thr Leu Val 260 265 270			872
ttctcatgac tgtacttggt gca			895

<210> 12
<211> 270
<212> PRT
<213> Mus musculus

<400> 12

Met Glu Gly Ser Trp Arg Asp Val Leu Ala Val Leu Val Ile Leu Ala 1 5 10 15
Gln Leu Thr Ala Ser Gly Ser Ser Tyr Gln Ile Ile Glu Gly Pro Gln 20 25 30
Asn Val Thr Val Leu Lys Asp Ser Glu Ala His Phe Asn Cys Thr Val 35 40 45
Thr His Gly Trp Lys Leu Leu Met Trp Thr Leu Asn Gln Met Val Val 50 55 60
Leu Ser Leu Thr Thr Gln Gly Pro Ile Ile Thr Asn Asn Arg Phe Thr 65 70 75 80
Tyr Ala Ser Tyr Asn Ser Thr Asp Ser Phe Ile Ser Glu Leu Ile Ile 85 90 95
His Asp Val Gln Pro Ser Asp Ser Gly Ser Val Gln Cys Ser Leu Gln 100 105 110

Asn Ser His Gly Phe Gly Ser Ala Phe Leu Ser Val Gln Asp Ser Ile
115 120 125

Gly Glu Glu Gly Pro Ala Leu Pro Thr Trp Ala Ile Ile Leu Leu Ala
130 135 140

Val Ala Phe Ser Leu Leu Leu Ile Leu Ile Ile Val Leu Ile Ile Ile
145 150 155 160

Phe Cys Cys Cys Cys Ala Ser Arg Arg Glu Lys Glu Glu Ser Thr Tyr
165 170 175

Gln Asn Glu Ile Arg Lys Ser Ala Asn Met Arg Thr Asn Lys Ala Asp
180 185 190

Pro Glu Thr Lys Leu Lys Ser Gly Lys Glu Asn Tyr Gly Tyr Ser Ser
195 200 205

Asp Glu Ala Lys Ala Ala Gln Thr Ala Ser Leu Pro Pro Lys Ser Ala
210 215 220

Glu Val Ser Leu Pro Glu Lys Arg Ser Ser Ser Leu Pro Tyr Gln Glu
225 230 235 240

Leu Asn Lys His Gln Pro Gly Pro Ala Thr His Pro Arg Val Ser Phe
245 250 255

Asp Ile Ala Ser Pro Gln Lys Val Arg Asn Val Thr Leu Val
260 265 270

<210> 13
<211> 754
<212> DNA
<213> Mus musculus

<220>
<221> CDS
<222> (53)..(721)

<400> 13
gtgaacgaga tacagagatt tacctgcctg aggtaaggaa gatcatgctg ag atg gag 58
Met Glu
1

ggc agc tgg aga gat gtc ctg gct gtg ctg gtc atc ctg gct cag ctg 106
Gly Ser Trp Arg Asp Val Leu Ala Val Leu Val Ile Leu Ala Gln Leu
5 10 15

aca gct tcc gga tcc agt tat cag atc ata gaa ggt cct cag aat gta 154
Thr Ala Ser Gly Ser Ser Tyr Gln Ile Ile Glu Gly Pro Gln Asn Val
20 25 30

aca gtc cta aag gac tca gag gct cac ttc aac tgc acc gtg act cac 202
Thr Val Leu Lys Asp Ser Glu Ala His Phe Asn Cys Thr Val Thr His

35	40	45	50	
ggc tgg aag ctt ctc atg tgg act ctt aac caa atg gtg gtg ctg agt				250
Gly Trp Lys Leu Leu Met Trp Thr Leu Asn Gln Met Val Val Leu Ser	55	60	65	
ctc acc acc caa gga ccc atc atc acc aac aac cgc ttc acc tat gcc				298
Leu Thr Thr Gln Gly Pro Ile Ile Thr Asn Asn Arg Phe Thr Tyr Ala	70	75	80	
agt tac aac agc act gac agc ttc atc tcg gag ttg atc atc cat gat				346
Ser Tyr Asn Ser Thr Asp Ser Phe Ile Ser Glu Leu Ile Ile His Asp	85	90	95	
gtg cag ccc agt gac tcg gga tcc gtg caa tgc agc ctg cag aac agc				394
Val Gln Pro Ser Asp Ser Gly Ser Val Gln Cys Ser Leu Gln Asn Ser	100	105	110	
cat ggg ttt gga tct gcc ttc ctc tca gtg caa gaa tct act tat caa				442
His Gly Phe Gly Ser Ala Phe Leu Ser Val Gln Glu Ser Thr Tyr Gln	115	120	125	130
aat gaa ata agg aaa tct gca aac atg agg aca aac aaa gca gat ccg				490
Asn Glu Ile Arg Lys Ser Ala Asn Met Arg Thr Asn Lys Ala Asp Pro	135	140	145	
gag aca aag tta aaa agt gga aag gaa aac tac ggg tac agt tcg gat				538
Glu Thr Lys Leu Lys Ser Gly Lys Glu Asn Tyr Gly Tyr Ser Ser Asp	150	155	160	
gag gca aag gct gca cag act gca tct ctc cct cct aaa tct gct gaa				586
Glu Ala Lys Ala Ala Gln Thr Ala Ser Leu Pro Pro Lys Ser Ala Glu	165	170	175	
gtc agc ctt cca gaa aaa cgc agc agt agc ctt cct tat cag gaa ctc				634
Val Ser Leu Pro Glu Lys Arg Ser Ser Ser Leu Pro Tyr Gln Glu Leu	180	185	190	
aat aaa cat cag ccc ggt cca gca act cat cca cgg gtt tcc ttt gac				682
Asn Lys His Gln Pro Gly Pro Ala Thr His Pro Arg Val Ser Phe Asp	195	200	205	210
atc gcc agt cct cag aag gtc aga aat gtg act tta gtg taataaagac				731
Ile Ala Ser Pro Gln Lys Val Arg Asn Val Thr Leu Val	215	220		
ttctcatgac tgtacttggt gca				754

<210> 14
 <211> 223
 <212> PRT
 <213> Mus musculus

<400> 14

Met Glu Gly Ser Trp Arg Asp Val Leu Ala Val Leu Val Ile Leu Ala
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Gln Leu Thr Ala Ser Gly Ser Ser Tyr Gln Ile Ile Glu Gly Pro Gln
 20 25 30

Asn Val Thr Val Leu Lys Asp Ser Glu Ala His Phe Asn Cys Thr Val
35 40 45

Thr His Gly Trp Lys Leu Leu Met Trp Thr Leu Asn Gln Met Val Val
50 55 60

Leu Ser Leu Thr Thr Gln Gly Pro Ile Ile Thr Asn Asn Arg Phe Thr
65 70 75 80

Tyr Ala Ser Tyr Asn Ser Thr Asp Ser Phe Ile Ser Glu Leu Ile Ile
85 90 95

His Asp Val Gln Pro Ser Asp Ser Gly Ser Val Gln Cys Ser Leu Gln
100 105 110

Asn Ser His Gly Phe Gly Ser Ala Phe Leu Ser Val Gln Glu Ser Thr
115 120 125

Tyr Gln Asn Glu Ile Arg Lys Ser Ala Asn Met Arg Thr Asn Lys Ala
130 135 140

Asp Pro Glu Thr Lys Leu Lys Ser Gly Lys Glu Asn Tyr Gly Tyr Ser
145 150 155 160

Ser Asp Glu Ala Lys Ala Ala Gln Thr Ala Ser Leu Pro Pro Lys Ser
165 170 175

Ala Glu Val Ser Leu Pro Glu Lys Arg Ser Ser Ser Leu Pro Tyr Gln
180 185 190

Glu Leu Asn Lys His Gln Pro Gly Pro Ala Thr His Pro Arg Val Ser
195 200 205

Phe Asp Ile Ala Ser Pro Gln Lys Val Arg Asn Val Thr Leu Val
210 215 220

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<213> Rattus rattus

<400> 15

Met Glu Gly Ser Trp Arg Asp Val Leu Ala Val Leu Val Ile Leu Ala
1 5 10 15

Gln Leu Thr Ala Ser Gly Ser Ser Tyr Gln Ile Ile Glu Gly Pro Gln
20 25 30

Met Ala Tyr Ser Cys Gln Pro Leu Gln Glu Ser Pro Leu Leu Gly Phe
35 40 45

Pro Arg Leu Arg Phe Ile His Leu Phe Val Leu Leu Leu Val Gly Leu
50 55 60

Leu Gln Ile Ser Ser Gly Ile Val Gly Gln Val Ser Lys Ser Val Arg
65 70 75 80

Asn Val Thr Val Leu Lys Asp Ser Glu Ala His Phe Asn Cys Thr Val
85 90 95

Thr His Gly Trp Lys Leu Leu Met Trp Thr Leu Asn Gln Met Val Val
100 105 110

Leu Ser Leu Thr Thr Gln Gly Pro Ile Ile Thr Asn Asn Arg Phe Glu
115 120 125

Lys Ala Leu Leu Ser Cys Asp Tyr Lys Phe Cys Ser Glu Glu Gln Ser
130 135 140

Ile His Arg Ile Tyr Trp Gln Lys His Asp Lys Met Val Leu Ser Val
145 150 155 160

Ile Ser Gly Val Pro Glu Val Trp Pro Lys Tyr Lys Asn Arg Thr Thr
165 170 175

Tyr Ala Ser Tyr Asn Ser Thr Asp Ser Phe Ile Ser Glu Leu Ile Ile
180 185 190

His Asp Val Gln Pro Ser Asp Ser Gly Ser Val Gln Cys Ser Leu Gln
195 200 205

Asn Ser His Gly Phe Gly Ser Ala Phe Leu Ser Val Gln Val Tyr Asp
210 215 220

Ile Ala Asn Asn Tyr Ser Phe Ser Leu Leu Gly Leu Ile Leu Ser Asp
225 230 235 240

Arg Gly Thr Tyr Thr Cys Val Val Gln Arg Tyr Glu Gly Gly Ser Tyr
245 250 255

Val Val Lys His Leu Thr Thr Val Glu Val Met Gly Thr Leu Asn Ile
260 265 270

Pro Ser Asn Asn Leu Ile Val Thr Glu Gly Glu Pro Cys Asn Val Thr
275 280 285

Cys Tyr Ala Val Gly Trp Thr Ser Leu Pro Asp Ile Ser Trp Glu Leu
290 295 300

Glu Val Pro Val Ser His Ser Leu Ser Val Arg Ala Asp Phe Pro Thr
305 310 315 320

Pro Asn Ile Thr Glu Tyr Gly Asn Pro Ser Ala Asp Ile Lys Arg Ile
325 330 335

Thr Cys Phe Ala Ser Gly Gly Phe Pro Lys Pro Arg Leu Ser Trp Leu
340 345 350

Glu Asn Gly Arg Glu Leu Asn Ser Tyr Asn Ser Phe Leu Glu Pro Gly
355 360 365

Asn Phe Met Arg Val Leu Ser Val Leu Asp Leu Thr Pro Leu Gly Asn
370 375 380

Gly Thr Leu Thr Cys Val Ala Glu Leu Lys Asp Leu Gln Ala Ser Lys

385		390		395		400
Ser Leu Thr Val	Asn Leu Gly Ile Asn Thr Thr Ile Ser Gln Asp Pro					
	405			410		415
Glu Ser Glu Leu Tyr Thr Ile Ser Ser Gln Leu Asp Phe Asn Ala Thr						
	420			425		430
Tyr Asp His Phe Ile Asp Cys Phe Ile Glu Tyr Gly Asp Ala His Val						
	435			440		445
Ser Gln Asn Phe Thr Val Val Gln Pro Pro Pro Asp Ser Ile Gly Glu						
	450			455		460
Glu Gly Pro Ala Leu Pro Thr Trp Ala Ile Ile Leu Leu Ala Val Ala						
	465			470		475
Phe Ser Leu Leu Leu Ile Leu Ile Ile Val Leu Ile Ile Ile Phe Thr						
				485		490
Trp Val Lys Pro Pro Glu Asp Pro Pro Asp Glu Lys Gln Thr Val Pro						
				500		505
Phe Ala Trp Ala Gly Pro Asp Ala Val Lys Ala Ile Ile Ile Phe Phe						
				515		520
Ile Ala Ile Thr Val Ile Ala Val Ile Ala Ala Ile Ala Ile Ile Ile						
				530		535
Phe Cys Cys Cys Cys Ala Ser Arg Arg Glu Lys Glu Glu Ser Thr Tyr						
				545		550
Gln Asn Glu Ile Arg Lys Ser Ala Asn Met Arg Thr Asn Lys Ala Asp						
				565		570
Pro Glu Thr Lys Leu Lys Ser Gly Lys Glu Asn Tyr Gly Tyr Ser Ser						
				580		585
Asp Glu Cys Ile Thr Val Lys Phe Arg Arg Cys Phe Arg Arg Arg Asn						
				595		600
Glu Ala Ser Arg Glu Thr Asn Lys Asn Leu Tyr Ile Gly Pro Val Glu						
				610		615
Ala Ala Ala Glu Gln Thr Val						
				625		630